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Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

1. (currently amended) A method for determining whether a substance is an activator or an inhibitor of a function of a protein comprising: (a) contacting the protein with a substance to be tested, wherein the protein is a DHAM-kinase, and wherein the DHAM-kinase is PAK2; and (b) measuring whether the function is inhibited or activated.
2. (currently amended) A method for determining whether a substance is an activator or an inhibitor of a function of a protein comprising: (a) contacting the protein with a substance to be tested, wherein the protein is a variant, mutant or fragment of a DHAM-kinase having a function of the corresponding DHAM-kinase, and wherein the DHAM-kinase is PAK2; and (b) measuring whether the function is inhibited or activated.
3. (currently amended) The method according to claim 1 or claim 2 wherein the inhibition or activation of the desired function is measured directly.
4. (currently amended) The method according to claim 1 or claim 2 wherein the inhibition or activation of the desired function is measured indirectly.
5. (currently amended) The method according to claim 1 or claim 2 wherein the DHAM-kinase is a mammalian DHAM-kinase.
6. (original) The method according to claim 5 wherein the DHAM-kinase is a human DHAM-kinase.
7. (currently amended) The method according to claim 1 or claim 2 wherein the method is performed using a cellular system.

8. (currently amended) The method according to claim 1 or claim 2 wherein the method is performed using a cell-free system.
9. (canceled)
10. (currently amended) The method according to claim 9-1 or claim 2 wherein the PAK2 consists of an amino acid sequence is of SEQ ID NO:4.
11. (currently amended) The method according to claim 9-10 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:4 having the same function of SEQ ID NO:4.
12. (withdrawn) The method according to claim 9 wherein the amino acid sequence is SEQ ID NO:10.
13. (withdrawn) The method according to claim 9 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:10 having the same function of SEQ ID NO:10.
14. (withdrawn) The method according to claim 9 wherein the amino acid sequence is SEQ ID NO:12.
15. (withdrawn) The method according to claim 9 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:12 having the same function of SEQ ID NO:12.
16. (currently amended) The method according to claim 1 or claim 2 wherein the function is a kinase activity.
17. (original) The method according to claim 16 wherein the function is substrate binding.

18. (original) The method according to claim 16 wherein the function is a specific phosphorylation of a substrate.
19. (withdrawn) A method for determining an expression level of a DHAM-kinase comprising: (a) determining the level of the DHAM-kinase expressed in a hyperactivated macrophage; (b) determining the level of the DHAM-kinase expressed in a non-hyperactivated macrophage; and (c) comparing the level of the DHAM-kinase expressed in step (a) to the level of the DHAM-kinase expressed in step (b), wherein a difference in levels indicates a differentially expressed DHAM-kinase.
20. (withdrawn) The method according to claim 19 wherein the hyperactivated macrophage is a mammalian macrophage and the non-hyperactivated macrophage is a mammalian macrophage.
21. (withdrawn) The method according to claim 20 wherein the hyperactivated macrophage is a human macrophage and the non-hyperactivated macrophage is a human macrophage.
22. (currently amended) The method ~~according~~ according to claim 19 wherein the difference in expression level is determined at the DHAM-kinase nucleic acid level.
23. (currently amended) The method ~~according~~ according to claim 19 wherein the difference in expression level is determined at the DHAM-kinase protein level.
24. (withdrawn) The method according to claim 23 wherein the DHAM-kinase protein consists of an amino acid sequence selected from the group consisting of: SEQ ID NO:4, SEQ ID NO:10, and SEQ ID NO:12.
25. (withdrawn) The method according to claim 24 wherein the amino acid sequence is SEQ ID NO:4.

26. (withdrawn) The method according to claim 24 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:4 having the same function of SEQ ID NO:4.
27. (withdrawn) The method according to claim 24 wherein the amino acid sequence is SEQ ID NO:10.
28. (withdrawn) The method according to claim 24 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:10 having the same function of SEQ ID NO:10.
29. (withdrawn) The method according to claim 24 wherein the amino acid sequence is SEQ ID NO:12.
30. (withdrawn) The method according to claim 24 wherein the amino acid sequence is a variant, mutant or fragment of SEQ ID NO:12 having the same function of SEQ ID NO:12.
31. (withdrawn) A method for diagnosing or monitoring a chronic inflammatory airway disease comprising: (a) determining the level of a DHAM-kinase expressed in a hyperactivated macrophage; (b) determining the level of the DHAM-kinase expressed in a non-hyperactivated macrophage; and (c) comparing the level of the DHAM-kinase expressed in step (a) to the level of the DHAM-kinase expressed in step (b), wherein a difference in levels indicates a differentially expressed DHAM-kinase.
32. (currently amended) The method ~~according~~ according to claim 31 wherein the difference in expression level is determined at the DHAM-kinase nucleic acid level.
33. (currently amended) The method ~~according~~ according to claim 31 wherein the difference in expression level is determined at the DHAM-kinase protein level.

34. (withdrawn) The method according to claim 31 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.
35. (withdrawn) The method according to claim 31 wherein the method is performed using a macrophage or a part thereof obtainable from a site of inflammation.
36. (withdrawn) A substance determined to be an activator or an inhibitor of a DHAM-kinase.
37. (withdrawn) A substance determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 1.
38. (withdrawn) A substance for the treatment of a disease wherein the substance is an activator or an inhibitor of a DHAM-kinase.
39. (withdrawn) The substance according to claim 38 wherein the disease is a chronic inflammatory airway disease.
40. (withdrawn) The substance according to claim 39 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.
41. (withdrawn) A pharmaceutical composition comprising at least one substance which is an activator or an inhibitor of a DHAM-kinase; and a pharmaceutical carrier.
42. (withdrawn) A pharmaceutical composition comprising at least one substance which is determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 1; and a pharmaceutical carrier.
43. (withdrawn) A pharmaceutical composition comprising at least one substance which is determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 9; and a pharmaceutical carrier.

44. (withdrawn) A method for treating a chronic inflammatory airway disease comprising: administering to a subject in need of such treatment an effective amount of a pharmaceutical composition comprising at least one substance determined to be an activator or an inhibitor of a DHAM-kinase.
45. (currently amended) The method according to claim 44 ~~for treating~~ wherein the subject is a mammal.
46. (currently amended) The method according to claim 44 ~~for treating~~ wherein the subject is a human being.
47. (withdrawn) The method according to claim 44 for treating a chronic inflammatory airway disease selected from the group consisting of: chronic bronchitis and COPD.
48. (withdrawn) A method for treating a chronic inflammatory airway disease comprising: administering to a subject in need of such treatment an effective amount of a pharmaceutical composition comprising at least one substance determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 1.
49. (withdrawn) A method for treating a chronic inflammatory airway disease comprising: administering to a subject in need of such treatment an effective amount of a pharmaceutical composition comprising at least one substance determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 9.
50. (withdrawn) A method for selectively modulating a DHAM-kinase in a macrophage, comprising administering a substance determined to be an activator or an inhibitor of a DHAM-kinase.
51. (withdrawn) The method according to claim 50 wherein the macrophage is involved in a chronic inflammatory airway disease.

52. (withdrawn) The method according to claim 50 wherein the chronic inflammatory airway disease is selected from the group consisting of: chronic bronchitis and COPD.
53. (withdrawn) A method for selectively modulating a DHAM-kinase in a macrophage, comprising administering a substance determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 1.
54. (withdrawn) A method for selectively modulating a DHAM-kinase in a macrophage, comprising administering a substance determined to be an activator or an inhibitor of a DHAM-kinase according to the method of claim 9.